

**IN THE CLAIMS:**

The following is a complete listing of claims in this application.

Claims 1-18 (canceled).

19. (currently amended) An opalescent glass ceramic which is devoid of  $ZrO_2$  and  $TiO_2$ , and which comprises an  $Me(II)O$  component in an amount of less than 4% by weight, and an  $Me(IV)O_2$  component in an amount of 0.5 to 3% by weight, the glass ceramic consisting essentially of:

| Component   | % by weight    |
|-------------|----------------|
| $SiO_2$     | 55 - 62        |
| $Al_2O_3$   | $13 \leq$ - 17 |
| $B_2O_3$    | 0 - 2          |
| $P_2O_5$    | 1.5 - 3        |
| $Li_2O$     | 0 - 2          |
| $Na_2O$     | 7 - 12         |
| $K_2O$      | 8 - 12         |
| $MgO$       | 0 - 2          |
| $CaO$       | 1 - <4         |
| $BaO$       | 0 - 2          |
| $Tb_2O_3$   | 0 - 3          |
| $Me(IV)O_2$ | 0.5 - 3        |

wherein said  $Me(IV)O_2$  consists essentially of ~~0-1% by weight  $CeO_2$  and 0-2.5% by weight  $SnO_2$~~   $0 < CeO_2 \leq 1$  and  $0 < SnO_2 \leq 2.5$ , and

wherein the glass ceramic has a thermal expansion coefficient (TEC) in the range of  $9.0 - 13.5 \times 10^{-6}/K$ .

20. (previously presented) The opalescent glass ceramic according to claim 19, wherein  $Me(II)O$  is present in an amount of 2-3.5% by weight.

21. (previously presented) The opalescent glass ceramic according to claim 19, having a composition of:

| Component                      | % by weight |
|--------------------------------|-------------|
| SiO <sub>2</sub>               | 58 - 60     |
| Al <sub>2</sub> O <sub>3</sub> | 14 - 15     |
| P <sub>2</sub> O <sub>5</sub>  | 2.3 - 2.6   |
| Na <sub>2</sub> O              | 9.5-10.5    |
| K <sub>2</sub> O               | 9 - 10      |
| CaO                            | 2.8 - 3     |
| Tb <sub>2</sub> O <sub>3</sub> | 0 - 2       |
| CeO <sub>2</sub>               | 0.3-0.4     |
| SnO <sub>2</sub>               | 1.3 - 1.6   |

22. (previously presented) The opalescent glass ceramic according to claim 19, which is a dental material or an additive for a dental material.

23. (previously presented) The opalescent glass ceramic according to claim 19, wherein the thermal expansion coefficient (TEC) is in the range of  $10.5 - 12.0 \times 10^{-6}/K$ .

24. (currently amended) A method for producing an opalescent glass ceramic which is devoid of ZrO<sub>2</sub> and TiO<sub>2</sub>, which has a thermal expansion coefficient (TEC) in the range of  $9.0 - 13.5 \times 10^{-6}/K$ , and which comprises an Me(II)O component in an amount of less than 4% by weight and an Me(IV)O<sub>2</sub> component in an amount of 0.5 to 3% by weight, comprising the steps of:

mixing together components consisting essentially of:

| Component                      | % by weight          |
|--------------------------------|----------------------|
| SiO <sub>2</sub>               | 55 - 62              |
| Al <sub>2</sub> O <sub>3</sub> | 13 <sub>≤</sub> - 17 |
| B <sub>2</sub> O <sub>3</sub>  | 0 - 2                |
| P <sub>2</sub> O <sub>5</sub>  | 1.5 - 3              |
| Li <sub>2</sub> O              | 0 - 2                |
| Na <sub>2</sub> O              | 7 - 12               |

|                                |              |
|--------------------------------|--------------|
| K <sub>2</sub> O               | 8 - 12       |
| MgO                            | 0 - 2        |
| CaO                            | 1 - $\leq$ 4 |
| BaO                            | 0 - 2        |
| Tb <sub>2</sub> O <sub>3</sub> | 0 - 3        |
| Me(IV)O <sub>2</sub>           | 0.5 - 3      |

wherein said Me(IV)O<sub>2</sub> consists essentially of ~~0-1% by weight CeO<sub>2</sub> and 0-2.5% by weight SnO<sub>2</sub>~~ 0 < CeO<sub>2</sub>  $\leq$  1 and 0 < SnO<sub>2</sub>  $\leq$  2.5,

- melting the mixture in a furnace;
- quenching the molten mass from the furnace in a water bath and drying to form a frit;
- grinding the frit in a mill;
- tempering the ground frit;
- drying the tempered frit, and filling the frit in a ball mill and grinding, and
- sifting the ground frit through a sieve.

25. (previously presented) The method according to claim 24, wherein the tempering of the frit comprises the steps of:

- stacking the ground frit on quartz-coated fire-clay plates,
- placing the fire-proof plates in a furnace heated to a temperature T with  $850^{\circ}\text{C} \leq T \leq 1000^{\circ}\text{C}$ , thereby fusing the ground frit,
- removing the plates from the furnace after a time t with  $30 \text{ min} \leq t \leq 60 \text{ min}$ , and
- quenching the fused frit in a water bath.

26. (previously presented) The method according to claim 24, wherein the components are mixed in a gyro mixer.

27. (previously presented) The method according to claim 24, wherein the mixture is melted in a gas-heated drip-feed

crucible furnace.

28. (previously presented) The method according to claim 24, wherein the filling and grinding step comprises filling the frit into a ball mill and grinding at about 10,000 revolutions per minute.

29. (previously presented) The method according to claim 24, wherein the ground frit is sifted through a sieve having a mesh size M in the range of  $80 \mu\text{m} \leq M \leq 120 \mu\text{m}$ .

30. (previously presented) The method according to claim 25, wherein the ground frit is fused at a temperature of 870 to 970° C.

31. (previously presented) The method according to claim 24, wherein the thermal expansion coefficient is set to  $9.0 - 13.5 \times 10^{-6}/\text{K}$  by adjusting the  $\text{K}_2\text{O}$  content.

32. (previously presented) The method according to claim 24, wherein the melting temperature of the opalescent glass ceramic is controlled to 870° C to 970° C.

33. (previously presented) The method according to claim 24, wherein % by weight  $\text{Al}_2\text{O}_3$  is 14-17.